IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of

MOUGIN, Nathalie — Atty. Ref.: 2365-34

Serial No. unknown — Group:

U.S. National Phase of PCT/FR01/01525

Filed: January 17, 2002 — Examiner:

For: COSMETIC USE OF BLOCK ETHYLENIC COPOLYMERS OF ELASTIC NATURE, AND COMPOSITIONS CONTAINING THEM

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January 17, 2002

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

PRELIMINARY AMENDMENT

In order to reduce filing costs, please amend the application as follows:

IN THE SPECIFICATION

Amend the specification as follows:

Page 1, before the first line, insert as a separate paragraph:

This application is the US national phase of international application PCT/FR01/01525 filed 18 May 2001, which designated the US.

IN THE CLAIMS

Please substitute the following amended claims for corresponding claims previously presented. A copy of the amended claims showing current revisions is attached.

3. (Amended) The use as claimed in claim 1, characterized in that said rigid block having a glass transition temperature (T_g) of greater than or equal to 20°C consists of units derived from one or more ethylenic monomers chosen from acrylic acid or methacrylic acid, C_{1-20} alkyl methacrylates containing a linear, branched or cyclic chain, C_{1-4} hydroxyalkyl methacrylates, certain vinyl esters, heterocyclic monomers, (meth)acrylamide, certain aliphatic, cycloaliphatic or aromatic methacrylamides, styrene, certain substituted styrenes, (meth)acrylic or vinyl monomers containing a fluoro or perfluoro group or (meth)acrylamides containing a fluoro or perfluoro group, (meth)acrylic or vinyl silicone monomers or silicone (meth)acrylamides, acrylic or vinyl monomers comprising an amine function that is optionally neutralized or quaternized, and ethylenic carboxybetaines or sulfobetaines.

4. (Amended) The use as claimed in claim 1, characterized in that said flexible block having a glass transition temperature (T_g) of less than 20°C consists of units derived from one or more ethylenic monomers chosen from C_{1-20} alkyl acrylates containing a linear, branched or cyclic chain, C_{6-20} aryl acrylates, C_{1-4} hydroxyalkyl acrylates, mono-, di- or poly(ethylene glycol) (meth)acrylates containing an optionally etherified hydroxyl end, certain aliphatic, cycloaliphatic or aromatic (meth)acrylamides,

certain vinyl ethers, certain substituted styrenes, acrylic or vinyl monomers containing a fluoro or perfluoro group, and acrylic or vinyl silicone monomers.

5. (Amended) The use as claimed in claim 1, characterized in that the block ethylenic copolymers are chosen from diblock copolymers of formula AB, triblock copolymers of formula ABA or BAB and polyblock copolymers of formula $(AB)_n$, $B(AB)_n$ or $(AB)_nA$, in which each A represents a rigid block having a glass transition temperature of greater than or equal to room temperature (20°C), each B represents a flexible block having a glass transition temperature of less than room temperature (20°C) and n is at least equal to two, preferably equal to 2 or 3, the blocks A of the same polymer possibly being identical or different, and the blocks B of the same polymer possibly being identical or different.

7. (Amended) The use as claimed in claim 1, characterized in that the block ethylenic copolymers are chosen from

- poly(methyl methacrylate-b-butyl acrylate-b-methyl methacrylate) triblock copolymers

- poly(methyl methacrylate-b-isobutyl acrylate-b-methyl methacrylate) triblock copolymers and

- poly(methyl methacrylate-b-butyl acrylate-b-styrene) triblock polymers.

8. (Amended) The use as claimed in claim 1, characterized in that the rigid blocks A are incompatible, that is to say immiscible, with the flexible blocks B.

9. (Amended) The use as claimed in claim 1, characterized in that the difference between the glass transition temperatures of the rigid blocks and the flexible

blocks is at least equal to 20°C, preferably greater than 50°C and ideally greater than 100°C.

10. (Amended) The use as claimed in claim 1, characterized in that said block polymers have an instantaneous recovery of between 5% and 95%, preferably between 10% and 90%, in particular between 20% and 80% and ideally between 55% and 78%.

11. (Amended) The use as claimed in claim 1, characterized in that the blocks A represent from 10% to 60% by weight and in particular from 15% to 50% by weight of the final block copolymer and the blocks B represent from 40% to 90% by weight and in particular from 50% to 85% by weight of the final block copolymer.

14. (Amended) The composition as claimed in claim 12, characterized in that said rigid block having a glass transition temperature (T_g) of greater than or equal to 20°C consists of units derived from one or more ethylenic monomers chosen from acrylic acid or methacrylic acid, C_{1-20} alkyl methacrylates containing a linear, branched or cyclic chain, C_{1-4} hydroxyalkyl methacrylates, certain vinyl esters, heterocyclic monomers, (meth)acrylamide, certain aliphatic, cycloaliphatic or aromatic methacrylamides, styrene, certain substituted styrenes, (meth)acrylic or vinyl monomers containing a fluoro or perfluoro group or (meth)acrylamides containing a fluoro or perfluoro group, (meth)acrylic or vinyl silicone monomers or silicone (meth)acrylamides, acrylic or vinyl monomers comprising an amine function that is optionally neutralized or quaternized, and ethylenic carboxybetaines or sulfobetaines.

15. (Amended) The cosmetic composition as claimed in claim 12, characterized in that said flexible block having a glass transition temperature (T_g) of less

than 20°C consists of units derived from one or more ethylenic monomers chosen from C_{1-20} alkyl acrylates containing a linear, branched or cyclic chain, C_{6-20} aryl acrylates, C_{1-4} hydroxyalkyl acrylates, mono-, di- or poly(ethylene glycol) (meth)acrylates containing an optionally etherified hydroxyl end, certain aliphatic, cycloaliphatic or aromatic (meth)acrylamides, certain vinyl ethers, certain substituted styrenes, acrylic or vinyl monomers containing a fluoro or perfluoro group, and acrylic or vinyl silicone monomers.

16. (Amended) The cosmetic composition as claimed in claim 12, characterized in that the block ethylenic copolymers are chosen from diblock copolymers of formula AB, triblock copolymers of formula ABA or BAB and polyblock copolymers of formula $(AB)_n$, in which each A represents a rigid block having a glass transition temperature of greater than or equal to room temperature (20°C), each B represents a flexible block having a glass transition temperature of less than room temperature (20°C) and n is at least equal to two, preferably equal to 2 or 3, the blocks A of the same polymer possibly being identical or different, and the blocks B of the same polymer possibly being identical or different.

17. (Amended) The compositions as claimed in claim 12 , characterized in that the ethylenic copolymers are triblock copolymers of formula ABA in which each A independently represents a rigid block having a glass transition temperature of greater than or equal to room temperature (20°C) and B represents a flexible block having a glass transition temperature which is less than room temperature (20°C).

18. (Amended) The composition as claimed in claim 12, characterized in that the rigid blocks A are incompatible, that is to say immiscible, with the flexible blocks B.

19. (Amended) The cosmetic composition as claimed in claim 12, characterized in that the ethylenic copolymers are chosen from

- poly(methyl methacrylate-b-butyl acrylate-b-methyl methacrylate) triblock copolymers

- poly(methyl methacrylate-b-isobutyl acrylate-b-methyl methacrylate) triblock copolymers and

- poly(methyl methacrylate-b-butyl acrylate-b-styrene) triblock polymers.

20. (Amended) The composition as claimed in claim 12, characterized in that the difference between the glass transition temperatures of the rigid blocks and the flexible blocks is at least equal to 20°C, preferably greater than 50°C and ideally greater than 100°C.

21. (Amended) The composition as claimed in claim 12, characterized in that said block polymers of elastic nature have an instantaneous recovery of between 5% and 95%, preferably between 10% and 90%, in particular between 20% and 80% and ideally between 55% and 78%.

22. (Amended) The composition as claimed in claim 12, characterized in that the blocks A represent from 10% to 60% by weight and in particular from 15% to 50% by weight of the final block copolymer and the blocks B represent from 40% to 90% by weight and in particular from 50% to 85% by weight of the final block copolymer.

23. (Amended) The cosmetic composition as claimed in claim 12, characterized in that it contains from 1% to 99% by weight, preferably from 5% to 50% by weight and most particularly from 7% to 40% by weight of said block copolymers of elastic nature.

24. (Amended) . The composition as claimed in claim 12, characterized in that said physiologically acceptable medium comprises one or more suitable solvents chosen from water, ketones, alcohols, alkylene glycols, alkylene glycol ethers, C_{2-7} alkyl acetates, ethers, alkanes, aromatic hydrocarbons, aldehydes and volatile oils.

25. (Amended) The cosmetic composition as claimed claim 12, characterized in that said physiologically acceptable medium also comprises a fatty phase composed of fatty substances that are liquid or solid at room temperature, of animal, plant, mineral or synthetic origin.

26 (Amended) . The cosmetic composition as claimed in claim 12, characterized in that said physiologically acceptable medium also comprises one or more thickeners, one or more film-forming polymers and/or one or more plasticizers.

27. (Amended) The cosmetic composition as claimed in claim 12, characterized in that said physiologically acceptable medium also comprises a particulate phase consisting of pigments and/or nacres and/or fillers.

28. (Amended) The cosmetic composition as claimed in claim 12, characterized in that said physiologically acceptable medium also comprises one or more additives such as antioxidants, fragrances, essential oils, preserving agents, lipophilic or hydrophilic cosmetic active agents, moisturizers, vitamins, colorants, essential fatty acids,

sphingolipids, self-tanning agents, sunscreens, antifoams, sequestering agents, antioxidants or free-radical scavengers.

29. (Amended) The cosmetic composition as claimed in claim 12, characterized in that it is in the form of a lotion, a suspension, a dispersion, an organic, aqueous or aqueous-alcoholic solution that is optionally thickened or gelled, a mousse, a spray, an oil-in-water, water-in-oil or multiple emulsion, a free, compact or cast powder, a solid or an anhydrous paste.

30. (Amended) The cosmetic composition as claimed in claim 12, characterized in that it is a hair lacquer.

31. (Amended) The cosmetic composition as claimed in claim 12, characterized in that it is a nail varnish.

32. (Amended) The cosmetic composition as claimed in claim 12 , characterized in that it is a make-up composition.

33. (Amended) The use as claimed in claim 1, to improve the styling power and suppleness of a hair lacquer.

34. (Amended) The use as claimed in claim 1, to increase the impact strength of a nail varnish.

35. (Amended) The use as claimed in claim 1, to improve the hold of a make-up composition.

REMARKS

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page(s) is captioned "**Version With Markings To Show Changes Made**."

The claims have been amended, without prejudice, to reduce filing costs.

An early and favorable Action on the merits is requested.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE SPECIFICATION

Page 1, before the first line, insert as a separate paragraph:

This application is the US national phase of international application PCT/FR01/01525 filed 18 May 2001, which designated the US.

IN THE CLAIMS

3. (Amended) The use as claimed in claim 1 ~~or 2~~, characterized in that said rigid block having a glass transition temperature (T_g) of greater than or equal to 20°C consists of units derived from one or more ethylenic monomers chosen from acrylic acid or methacrylic acid, C_{1-20} alkyl methacrylates containing a linear, branched or cyclic chain, C_{1-4} hydroxyalkyl methacrylates, certain vinyl esters, heterocyclic monomers, (meth)acrylamide, certain aliphatic, cycloaliphatic or aromatic methacrylamides, styrene, certain substituted styrenes, (meth)acrylic or vinyl monomers containing a fluoro or perfluoro group or (meth)acrylamides containing a fluoro or perfluoro group, (meth)acrylic or vinyl silicone monomers or silicone (meth)acrylamides, acrylic or vinyl monomers comprising an amine function that is optionally neutralized or quaternized, and ethylenic carboxybetaines or sulfobetaines.

4. (Amended) The use as claimed in ~~one of the preceding~~ claim~~s~~ 1, characterized in that said flexible block having a glass transition temperature (T_g) of less than 20°C consists of units derived from one or more ethylenic monomers chosen from C_{1-20} alkyl acrylates containing a linear, branched or cyclic chain, C_{6-20} aryl acrylates, C_{1-4}

hydroxyalkyl acrylates, mono-, di- or poly(ethylene glycol) (meth)acrylates containing an optionally etherified hydroxyl end, certain aliphatic, cycloaliphatic or aromatic (meth)acrylamides, certain vinyl ethers, certain substituted styrenes, acrylic or vinyl monomers containing a fluoro or perfluoro group, and acrylic or vinyl silicone monomers.

5. (Amended) The use as claimed in ~~any one of the preceding~~ claims 1, characterized in that the block ethylenic copolymers are chosen from diblock copolymers of formula AB, triblock copolymers of formula ABA or BAB and polyblock copolymers of formula $(AB)_n$, $B(AB)_n$ or $(AB)_nA$, in which each A represents a rigid block having a glass transition temperature of greater than or equal to room temperature (20°C), each B represents a flexible block having a glass transition temperature of less than room temperature (20°C) and n is at least equal to two, preferably equal to 2 or 3, the blocks A of the same polymer possibly being identical or different, and the blocks B of the same polymer possibly being identical or different.

7. (Amended) The use as claimed in ~~any one of the preceding~~ claims 1, characterized in that the block ethylenic copolymers are chosen from

- poly(methyl methacrylate-b-butyl acrylate-b-methyl methacrylate) triblock copolymers

- poly(methyl methacrylate-b-isobutyl acrylate-b-methyl methacrylate) triblock copolymers and

- poly(methyl methacrylate-b-butyl acrylate-b-styrene) triblock polymers.

8. (Amended) The use as claimed in ~~any one of the preceding~~ claims 1, characterized in that the rigid blocks A are incompatible, that is to say immiscible, with the flexible blocks B.

9. (Amended) The use as claimed in ~~any one of the preceding~~ claims 1, characterized in that the difference between the glass transition temperatures of the rigid blocks and the flexible blocks is at least equal to 20°C, preferably greater than 50°C and ideally greater than 100°C.

10. (Amended) The use as claimed in ~~any one of the preceding~~ claims 1, characterized in that said block polymers have an instantaneous recovery of between 5% and 95%, preferably between 10% and 90%, in particular between 20% and 80% and ideally between 55% and 78%.

11. (Amended) The use as claimed in ~~any one of the preceding~~ claims 1, characterized in that the blocks A represent from 10% to 60% by weight and in particular from 15% to 50% by weight of the final block copolymer and the blocks B represent from 40% to 90% by weight and in particular from 50% to 85% by weight of the final block copolymer.

14. (Amended) The composition as claimed in claim 12 ~~or 13~~, characterized in that said rigid block having a glass transition temperature (T_g) of greater than or equal to 20°C consists of units derived from one or more ethylenic monomers chosen from acrylic acid or methacrylic acid, C_{1-20} alkyl methacrylates containing a linear, branched or cyclic chain, C_{1-4} hydroxyalkyl methacrylates, certain vinyl esters, heterocyclic monomers, (meth)acrylamide, certain aliphatic, cycloaliphatic or aromatic methacrylamides, styrene,

certain substituted styrenes, (meth)acrylic or vinyl monomers containing a fluoro or perfluoro group or (meth)acrylamides containing a fluoro or perfluoro group, (meth)acrylic or vinyl silicone monomers or silicone (meth)acrylamides, acrylic or vinyl monomers comprising an amine function that is optionally neutralized or quaternized, and ethylenic carboxybetaines or sulfobetaines.

15. (Amended) The cosmetic composition as claimed in ~~one of~~ claim~~s~~ 12~~-to 14~~, characterized in that said flexible block having a glass transition temperature (T_g) of less than 20°C consists of units derived from one or more ethylenic monomers chosen from C_{1-20} alkyl acrylates containing a linear, branched or cyclic chain, C_{6-20} aryl acrylates, C_{1-4} hydroxyalkyl acrylates, mono-, di- or poly(ethylene glycol) (meth)acrylates containing an optionally etherified hydroxyl end, certain aliphatic, cycloaliphatic or aromatic (meth)acrylamides, certain vinyl ethers, certain substituted styrenes, acrylic or vinyl monomers containing a fluoro or perfluoro group, and acrylic or vinyl silicone monomers.

16. (Amended) The cosmetic composition as claimed in ~~any one of~~ claim~~s~~ 12 ~~to 15~~, characterized in that the block ethylenic copolymers are chosen from diblock copolymers of formula AB, triblock copolymers of formula ABA or BAB and polyblock copolymers of formula $(AB)_n$, in which each A represents a rigid block having a glass transition temperature of greater than or equal to room temperature (20°C), each B represents a flexible block having a glass transition temperature of less than room temperature (20°C) and n is at least equal to two, preferably equal to 2 or 3, the blocks A

of the same polymer possibly being identical or different, and the blocks B of the same polymer possibly being identical or different.

17. (Amended) The compositions as claimed in ~~any one of~~ claims 12 ~~to 16~~, characterized in that the ethylenic copolymers are triblock copolymers of formula ABA in which each A independently represents a rigid block having a glass transition temperature of greater than or equal to room temperature (20°C) and B represents a flexible block having a glass transition temperature which is less than room temperature (20°C).

18. (Amended) The composition as claimed in ~~any one of~~ claims 12 ~~to 17~~, characterized in that the rigid blocks A are incompatible, that is to say immiscible, with the flexible blocks B.

19. (Amended) The cosmetic composition as claimed in ~~any one of~~ claims 12 ~~to 18~~, characterized in that the ethylenic copolymers are chosen from

- poly(methyl methacrylate-b-butyl acrylate-b-methyl methacrylate) triblock copolymers

- poly(methyl methacrylate-b-isobutyl acrylate-b-methyl methacrylate) triblock copolymers and

- poly(methyl methacrylate-b-butyl acrylate-b-styrene) triblock polymers.

20. (Amended) The composition as claimed in ~~any one of~~ claims 12 ~~to 19~~, characterized in that the difference between the glass transition temperatures of the rigid blocks and the flexible blocks is at least equal to 20°C, preferably greater than 50°C and ideally greater than 100°C.

21. (Amended) The composition as claimed in ~~any one of~~ claims 12 ~~to 20~~, characterized in that said block polymers of elastic nature have an instantaneous recovery of between 5% and 95%, preferably between 10% and 90%, in particular between 20% and 80% and ideally between 55% and 78%.

22. (Amended) The composition as claimed in ~~any one of~~ claims 12 ~~to 21~~, characterized in that the blocks A represent from 10% to 60% by weight and in particular from 15% to 50% by weight of the final block copolymer and the blocks B represent from 40% to 90% by weight and in particular from 50% to 85% by weight of the final block copolymer.

23. (Amended) The cosmetic composition as claimed in ~~any one of~~ claims 12 ~~to 22~~, characterized in that it contains from 1% to 99% by weight, preferably from 5% to 50% by weight and most particularly from 7% to 40% by weight of said block copolymers of elastic nature.

24 (Amended) . The composition as claimed in ~~any one of~~ claims 12 ~~to 23~~, characterized in that said physiologically acceptable medium comprises one or more suitable solvents chosen from water, ketones, alcohols, alkylene glycols, alkylene glycol ethers, C_{2-7} alkyl acetates, ethers, alkanes, aromatic hydrocarbons, aldehydes and volatile oils.

25. (Amended) The cosmetic composition as claimed ~~in any one of~~ claims 12 ~~to 24~~, characterized in that said physiologically acceptable medium also comprises a fatty phase composed of fatty substances that are liquid or solid at room temperature, of animal, plant, mineral or synthetic origin.

26 (Amended) . The cosmetic composition as claimed in ~~any one of~~ claim~~s~~ 12 ~~to 25~~, characterized in that said physiologically acceptable medium also comprises one or more thickeners, one or more film-forming polymers and/or one or more plasticizers.

27. (Amended) The cosmetic composition as claimed in ~~any one of~~ claim~~s~~ 12 ~~to 26~~, characterized in that said physiologically acceptable medium also comprises a particulate phase consisting of pigments and/or nacres and/or fillers.

28. (Amended) The cosmetic composition as claimed in ~~any one of~~ claim~~s~~ 12 ~~to 27~~, characterized in that said physiologically acceptable medium also comprises one or more additives such as antioxidants, fragrances, essential oils, preserving agents, lipophilic or hydrophilic cosmetic active agents, moisturizers, vitamins, colorants, essential fatty acids, sphingolipids, self-tanning agents, sunscreens, antifoams, sequestering agents, antioxidants or free-radical scavengers.

29. (Amended) The cosmetic composition as claimed in ~~any one of~~ claim~~s~~ 12 ~~to 28~~, characterized in that it is in the form of a lotion, a suspension, a dispersion, an organic, aqueous or aqueous-alcoholic solution that is optionally thickened or gelled, a mousse, a spray, an oil-in-water, water-in-oil or multiple emulsion, a free, compact or cast powder, a solid or an anhydrous paste.

30. (Amended) The cosmetic composition as claimed in ~~any one of~~ claim~~s~~ 12 ~~to 29~~, characterized in that it is a hair lacquer.

31. (Amended) The cosmetic composition as claimed in ~~any one of~~ claim~~s~~ 12 ~~to 29~~, characterized in that it is a nail varnish.

32. (Amended) The cosmetic composition as claimed in ~~any one of~~ claims 12 ~~to 29~~, characterized in that it is a make-up composition.

33. (Amended) The use as claimed in ~~any one of~~ claims 1 ~~to 11~~, to improve the styling power and suppleness of a hair lacquer.

34. (Amended) The use as claimed in ~~any one of~~ claims 1 ~~to 11~~, to increase the impact strength of a nail varnish.

35. (Amended) The use as claimed in ~~any one of~~ claims 1 ~~to 11~~, to improve the hold of a make-up composition.